

I. PERSONAL INFORMATION

Assistant Professor
Construction Engineering and Management Program
Department of Civil, Environmental, and Architectural Engineering
University of Colorado at Boulder
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Boulder, Colorado 80309-0428
Telephone: 303-735-4276
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II. RELATED EXPERIENCE

Assistant Professor, August 1999 to Present, Department of Civil, Environmental and Architectural Engineering,
University of Colorado – Boulder, Colorado
Assistant Professor, September 1997 – August 1999, School of Civil and Environmental Engineering, Georgia
Institute of Technology – Atlanta, Georgia
Instructor/Research Assistant, June 1994 – August 1997, Department of Civil, Environmental and Architectural
Engineering, University of Colorado – Boulder, Colorado
Pre-Construction Services Consultant, February 1991 – August 1997, Architectural Resource Consultants, Inc. –
Boulder, Colorado
Assistant Site Superintendent, June 1988 – February 1991, Spectrum Builders, Inc. – Boulder, Colorado
Engineer in Training (1990) – Colorado #17179

III. EARNED DEGREES

University of Colorado – Boulder, Colorado

Doctor of Philosophy, Civil Engineering, Construction Engineering and Management, August 1997
Master of Science, Civil Engineering, Construction Engineering and Management, December 1995
Bachelor of Science, Architectural Engineering, May 1990

IV. AWARDS AND HONORS

Named in Top 50 “Trendsetters” by Public Works Magazine, 2004
Society of American Military Engineers, Toulmin Medal, The Military Engineer, 2003
University of Colorado CEAE Young Researcher Award, 2002
Design-Build Institute of America, Charter Designee, Design-Build Professional, 2002
U.S. General Services Administration, Construction Excellence Peer, 2000-2003
ASCE 2000 Thomas Finch Rowland Award, Journal of Construction Engineering and Management, 2001
Design-Build Institute of America Academic Leadership Award, 2000
Big 12 Faculty Fellowship Award, 2000
University of Colorado CRCW Junior Faculty Development Award, 2000
Center for the Enhancement of Teaching and Learning (CETL) Teaching Fellow, 1999
J.A. Jones/Metric Constructors, Continuous Quality Improvement Award, 1998
National Science Foundation Engineering Education Scholar, 1998
U.S. Department of Education GAANN Fellowship Recipient, 1996–97

V. REFEREED PUBLICATIONS

1. Published Journal Articles

- [1] Molenaar, K.R. (2005). “Programmatic Cost Risk Analysis for Highway Mega-Projects,” *In press with the ASCE Journal of Construction Engineering and Management*.
- [2] Gransberg, D.D. and Molenaar, K.R. (2004). “Life Cycle Cost Award Algorithms for Design-Build Highway Pavement Projects,” *ASCE Journal of Infrastructure Systems*, 10(4), 167-175.
- [3] Molenaar, K.R. (2004). “Framework for Comparing Project Delivery Costs,” *AACEI Journal of Cost Engineering* 46(11), 24-32.
- [4] Gransberg, D.D. and Molenaar, K.R. (2004). “Analysis of Owner’s Design and Construction Quality Management Approaches in Design-Build Projects” *ASCE Journal of Management in Engineering*, 20(4), 162-169.

- [5] Corotis, R.B., Frangopol, D.M., Diekmann, J.E., Molenaar, K.R., and Hearn, G. (2004) "An Educational Experiment to Address Critical Infrastructure Needs." *The International Journal of Critical Infrastructure*. 1(1), 11 pp.
- [6] Molenaar, K.R., Bogus, S.M., and Priestley, J.M. (2004). "Design-Build for Water/Wastewater Facilities: State of the Industry Survey and Three Case Studies," *ASCE Journal of Management in Engineering*, 20(1), 16-24.
- [7] Gransberg, D.D. and Molenaar, K.R. (2003). "A Synthesis of Public Design-Build Source Selection Methods" *International Journal of Construction Procurement*, 9(2), pp 40-51.
- [8] Molenaar, K.R., and Saller, B.J. (2003). "Educational Needs Assessment for Design-Build Project Delivery," *ASCE Journal of Professional Issues in Eng. Education and Practice*. 129(2), 106-114.
- [9] Molenaar, K.R., Brown, H.M., Caile, S., and Smith, R. (2002). "Corporate Culture: A Study of Firms with Outstanding Construction Safety," *ASSE Journal of Professional Safety*, Vol. 47, No. 7, pp. 18-27.
- [10] Molenaar, K.R., and Songer, A.D. (2001). "Web-Based Decision Support Systems: A Case Study in Project Delivery," *ASCE Journal of Computing in Civil Engineering*, Vol. 15, No. 4, pp. 259-267.
- [11] Molenaar, K.R., and Gransberg, D.D. (2001). "Design-Builder Selection for Small Highway Projects," *ASCE Journal of Engineering Management*, Vol. 17, No. 4, pp. 214-223.
- [12] Molenaar, K.R., Washington, S., and Diekmann, J.E. (2000). "A Structural Equation Model of Construction Contract Dispute Potential," *ASCE Journal of Construction Engineering and Management*, Vol. 126, No. 4, pp. 261-267.¹
- [13] Molenaar, K.R., Songer, A.D., and Barash, M. (1999). "Public Sector Design-Build Evolution and Performance," *ASCE Journal of Engineering Management*, Vol. 9, No. 2, pp. 54-62.
- [14] Molenaar, K.R., and Songer, A.D. (1998). "Model for Public Sector Design-Build Project Selection," *ASCE Journal of Construction Engineering and Management*, Vol. 124, No. 6, pp. 467-479.
- [15] Songer, A.D., and Molenaar, K.R. (1997). "Appropriate Project Characteristics for Public Sector Design-Build Projects," *ASCE Journal of Construction Engineering and Management*, Vol. 123, No 1, pp. 34-40.
- [16] Diekmann, J.E., Featherman, D., Moody, R., Molenaar, K.R., and Rodriguez-Guy, M. (1996). "Project Cost Analysis Using Influence Diagrams," *PMI Project Management Journal*, Vol. 28, No. 4, pp. 23-30.
- [17] Songer, A.D., and Molenaar, K.R. (1996). "Selecting Design-Build: Private and Public Sector Owner Attitudes," *ASCE Journal of Engineering Management*, Vol. 12, No. 6, pp. 47-53.
- [18] Songer, A.D., Molenaar, K.R., and Robinson, G. (1996). "Selection Factors and Success Criteria for Design-Build in the U.S. and U.K.," *International Journal of Construction Procurement*, November 1996, Vol. 2, No. 2, pp. 69-82.

VI. RESEARCH REPORTS

- [19] Molenaar, K.R. (2003). 2002 European Asphalt Pavement Warranties Scan Final Report, *Report #FHWA-PL-04-002, International Technology Program, Federal Highway Administration*, Washington DC, November 2003. 72 pp.
- [20] Molenaar, K.R. (2003). 2004 International Scan of Construction Management Practices for Effective Project Delivery, Contract Compliance and Quality Assurance – Desk Scan Report, *Report to the International Technology Program, Federal Highway Administration*, Washington DC, December 2003. 27 pages.
- [21] Dornan, D., Molenaar, K.R., Macek, N., and Shane, J.S. (2003), Report to U.S. Congress on the Effectiveness of Design-Build – Interim Report Preliminary Evaluation of Literature Search and Draft Model, *Report to the Federal Highway Administration*, Washington DC, March 2003. 35 pages.
- [22] Molenaar, K.R., Gransberg, D.D. and Scott, S. (2003). Best-Value Procurement for Highway Construction – Interim Report, NCRP 10-61, National Cooperative Highway Research Program, National Academies, Washington, DC. 182 pp.
- [23] Gransberg, D.D. and Molenaar, K.R. (2003). State of the Practice in Life Cycle-Oriented Design and Construction for Transportation Projects *Report to the Design-Build Research Foundation*, Washington, DC, January 2003. 54 pp.
- [24] Molenaar, K.R., Bogus, S.M., and Priestley, J.M. (2003). Best Practices in Design-Build for the Water and Wastewater Industry, *Report to the Design-Build Research Foundation, DBERF Document Number F00103, ISBN 0-9719335-9-6*, Washington, DC, January 2003. 50 pp.

¹ Winner of the Thomas Finch Rowland Award for best paper of the year from the American Society of Civil Engineers

Keith R. Molenaar, Ph.D.

- [25] Molenaar, K.R. (2003). Washington State Department of Transportation Design-Build Pilot Project Evaluation: A Measurement of Performance for the Process, Cost, Time, and Quality, *Report to the Washington State Department of Transportation*, Olympia, Washington, January 2003. 79 pp.
- [26] Molenaar, K.R. (2002). 2001 European Contract Administration Scan Final Report, *Report #FHWA-PL-03-002, International Technology Program, Federal Highway Administration*, Washington DC, October 2002. 111 pp.
- [27] Molenaar, K.R. (2002). 2002 European Asphalt Pavement Warranties Desk Scan, *Report to the International Technology Program, Federal Highway Administration*, Washington DC, April 2002. 33 pp.
- [28] Molenaar, K.R. (2002). WSDOT Design-Build Pilot Project Interim Report – Evaluation of Contract Administration Process, *Report to the Washington State Department of Transportation*, Olympia, Washington, January 2002. 21 pp.
- [29] Molenaar, K.R., Saller, B.J., Park, J.I. and Wells, J. (2001). Educational Needs for Design-Build Project Delivery, *Report to the Design-Build Research Foundation*, March 2001. 22 pp.
- [30] Molenaar, K.R., Brown, H., Caile, S., and Smith, R. (2001). A Study of Corporate Culture in Companies with Outstanding Construction Safety, *Report to the American Society of Safety Engineers*, May 2001. 33 pp.
- [31] Molenaar, K.R. (2001). WSDOT Design-Build Pilot Project Interim Report – Evaluation of RFP/BAFP Selection Process, *Report to the Washington State Department of Transportation*, Olympia, Washington, July 2001. 39 pp.
- [32] Molenaar, K.R. (2000). 2001 European Contract Administration Desk Scan, *Report to the International Technology Program, Federal Highway Administration*, Washington, DC, December 2000. 28 pp.
- [33] Molenaar, K.R. (2000). Design-Build Pilot Project Evaluation Interim Report, *Report to the Washington State Department of Transportation*, Olympia, WA, November 2000, 10 pp.
- [34] Molenaar, K.R. and Chinowsky, P. (1999). Georgia Construction Economic Impact Analysis, *Report to ABC, AGC, GHC, NECA, HBAG, GACEC, CECA, MCAA, and CAAG*, November 1999. 42 pp.
- [35] Molenaar, K.R. (1999). WSDOT Design-Build Pilot Project Evaluation Interim Report – Evaluation Work Plan, *Report to the Washington State Department of Transportation*, Olympia, WA, November 1999. 88 pp.
- [36] Molenaar, K.R., Zimring, C., and Godfried, A. (1998). A Guide to Project Delivery for Federal Buildings, *Report to the U.S. General Services Administration*, Washington, DC, November 1998. 22 pp.
- [37] Diekmann, J.E., Molenaar, K.R., and Rodriguez-Guy, M.Y. (1995). Procedural and Computational Studies for Cost Risk Analysis of DOE Hazardous Waste Remediation Projects, *Report to the U.S. Department of Energy*, Washington, DC, January 1995. 125 pp.

VII. BOOKS/BOOK CHAPTERS

- [38] Gransberg, D.D., Koch, J., and Molenaar, K.R., (2004). Preparing for Design-Build Projects: A Primer for Owners, Engineers, and Contractors. *To be published by the American Society of Civil Engineers Press in Fall of 2004*, Reston, Virginia. Approx. 275 pp.
- [39] Molenaar, K.R., and Scott, S. (2003). Book chapter “Examining the Performance of Design-Build in the Public Sector,” *Design-Build for the Public Sector, Edited by Michael Loulakis*, Aspen Business and Law, Aspen Publishers, 71-112.

VIII. OTHER PUBLICATIONS

- [40] Molenaar, K.R., and Johnson, D. (2003). “Engineering the Procurement Process to Achieve Best Value,” *ASCE Journal of Leadership and Management in Engineering*, Vol. 3, No. 3, pp. 137-141.
- [41] Allen, L.N., Gransberg, D.D., and Molenaar, K.R. (2002). “Partnering Design-Build Contracts,” *The Military Engineer*, Vol. 94, No. 616, pp 47-48.²
- [42] Gransberg, D.D., and K.R. Molenaar, Co-Editors (2001). “Project Delivery Methods Professional Practice Guide,” *AACE-International*, Morgantown, West Virginia.
- [43] Molenaar, K.R., and Gransberg, D.D. (2001). “Design-Build Contracting for Transportation Instructors Manual,” *Washington State Department of Transportation*, Olympia, WA.
- [44] Gransberg, D.D., Koch, J. and Molenaar, K.R. (2001). “Cost Engineering Workbook,” *American Society of Civil Engineers*, Reston, VA.
- [45] Molenaar, K.R., and Bogus, S.M. (2000). “Is the price really right? Best value selection for public works projects,” *Water Environment & Technology*, Vol. 12, No. 7, pp. 29-32.

² Winner of the Toulmin Medal for best paper of the year from the Society of American Military Engineers

- [46] Gransberg, D.D., Koch, J., and Molenaar, K.R. (2000). "Design Build Contract Administration Workbook," *American Society of Civil Engineers*, Reston, VA.
- [47] Gransberg, D.D., and Molenaar, K.R. (2000). "Design-Build Contracting for Transportation Workbook," *American Society of Civil Engineers*, Reston, VA.

IX. CONFERENCE PROCEEDINGS

1. Editor – Published Peer-Reviewed Conference Proceedings

- [48] Molenaar, K.R. and Chinowsky, P. (2003). "Winds of Change: Integration and Innovation in Construction," *Proceedings of the Construction Research Congress held in Honolulu, Hawaii, March 19-21, 2003*, Published by the American Society of Civil Engineers, ISBN: 0-7844-0671-5, 2003. 1350 pp.

2. Published Peer-Reviewed Conference Proceedings

- [49] Molenaar K.R., D'Angelo, J., and Whited, G.C. (2004). "European Asphalt Pavement Warranties," *Association of Asphalt Paving Technologists International Symposium on Design and Construction of Long Lasting Asphalt Pavements*, Auburn, Alabama, June 2004.
- [50] Thiengburanatham, P., Wang, Y., Diekmann, J.E., and Molenaar, K.R. (2003). "Production Scheduling in Construction," *CICE 2nd Annual Conference on Innovative Developments in Architecture, Engineering and Construction*, Loughborough, United Kingdom, June, 2003.
- [51] Gransberg, D.D., Badillo-Kwiatkowski, G., and Molenaar, K.R. (2003). "Project Delivery Comparison Using Performance Metrics," *AACE International's 47th Annual Meeting*, Orlando, Florida, June 2003.
- [52] Gransberg, D.D., and Molenaar, K.R. (2003). "Lifecycle Design Criteria for Design-Build Transportation Projects," *ASCE Construction Research Congress*, Honolulu, HI, March 2003.
- [53] Bogus, S.M., Diekmann, J.E., and Molenaar, K.R. (2002). "A Methodology to Reconfigure the Design-Construction Interface for Fast-Track Projects," *ASCE & EG-ICE Joint Conference on Information Technology in Civil Engineering*, Washington, D.C., November 2002.
- [54] Molenaar, K.R. (2002). "Innovative Contract Administration: A Report of the European Contract Administration Scan Tour," *Proceedings of the CIB's 10th International Symposium on the Organization and Management of Construction, Construction Innovation, and Global Competitiveness*, Cincinnati, OH, September 2002.
- [55] Molenaar, K.R., Smith, R., and Sencer, J. (2000). "Stakeholder Input in Design-Build Highway Construction," *ASCE Proceedings of the Construction Congress VI*, Orlando, FL, February 2000. pp. 611-620.
- [56] Molenaar, K.R., Vanegas, J., and Martinez, H. (2000). "Appropriate Risk Allocation in Design-Build RFPs," *ASCE Proceedings of the Construction Congress VI*, Orlando, FL, February 2000. pp. 1083-1092.
- [57] Shin, K.C., and Molenaar, K.R. (2000). "Predicting Construction Disputes in Change Issues," *ASCE Proceedings of the Construction Congress VI*, Orlando, FL, February 2000. pp. 534-542.
- [58] Molenaar, K.R. (1999). "Selecting Appropriate Projects for Design-Build Procurement," *Proceedings of the CIB Procurement Systems Conference*, Chiang Mai, Thailand, January 1999.
- [59] Molenaar, K.R., and Martinez, H.S. (1998). "Web-Based Decision Support Systems," *Proceedings of the First International Conference on New Information Technologies for Decision Making in Civil Engineering – Vol. 2*, Montreal, Canada, October 1998, pp. 1127-1138.
- [60] Molenaar, K.R., and Songer, A.D. (1998). "Design-Build Selector (DBS): An Automated Tool For Project Selection," *ASCE Proceedings of the International Computing Congress*, Boston, MA, October 1998. pp. 147-156.
- [61] Molenaar, K.R., Songer, A.D., and Barash, J. (1997). "An Automated Prediction Tool for Design-Build Projects," *ASCE Proceedings of the Construction Congress V*, Minneapolis, MN, October 1997, pp. 582-589.

3. Other Conference Proceedings

- [62] Molenaar, K.R., and Johnson, D. (2001). "Engineering the Procurement Process to Achieve Best Value," *FHWA/ASHTO/DBIA Conference on Design-Build for Transportation*, Denver, CO, April 2001.
- [63] Nicholson, M., and Molenaar, K.R. (2000). "Building Commissioning, Ensuring Quality and Savings," *ASCE Proceedings of the Construction Congress VI*, Orlando, FL, February 2000. pp. 1074-1082.
- [64] Songer, A.D., and Molenaar, K.R. (1996). "Design-Build Selector: A Predictive Tool for the Selection for Public Sector Design-Build," *AIA/DBIA Conference on Design-Build*, Washington, DC, October 1996.

X. OTHER INTELLECTUAL PROPERTY

DBS: Design-Build Selector (Software) – An automated tool developed for public sector design-build project selection. Developed through work supported by the National Science Foundation under Grant No. CMS-9410683. (Available at <http://www.colorado.edu/engineering/civil/db>)

XI. RESEARCH SUPPORT

1. Current

Procedures for Cost Estimation and Management of Highway Projects During Planning, Programming, and Preconstruction, *National Cooperative Highway Research Program (NCHRP 8-49)*, PI Anderson, Co-PIs Molenaar & Schexnayder, Mar. 2004 – Jan. 2006.

(\$300,000 Total – \$80,000 CU)

Quantify Construction Delays Due to Weather, *Federal Highway Administration, Central Federal Land Highway Division*, Co-PIs, Xi, Balaji, and Molenaar, Oct. 2003 to Mar. 2005.

(\$80,000 Total CU)

A Methodology to Reconfigure the Design Construction Interface for Fast-Track Projects, National Science Foundation (CMS-0324342), Co-PIs Diekmann and Molenaar, Sep. 2003 to Aug. 2005.

(\$253,331 Total CU)

How to Achieve a Learning Organization: Best Practices, Tools, & Techniques, *Construction Industry Institute*, Co-PIs Chinowsky & Molenaar, Jan. 2003 – Sept. 2005.

(\$212,000 Total – \$140,000 CU – \$57,000 Univ. Match)

Develop Lifecycle Evaluation Criteria for Design-Build Transportation Projects, *Design-Build Education and Research Foundation*, Co-PIs Gransberg and Molenaar, Jan. 2002 – Jan. 2005.

(\$45,000 Total – \$17,000 CU)

2. Completed

Construction Peer Excellence Web Portal Development, *US General Services Administration*, PI Molenaar, January 2004 to October 2004.

(\$52,618 Total CU)

Report to U.S. Congress on the Effectiveness of Design-Build, *Federal Highway Administration (FHWA DTFH61-98-C-00074)*, PI Dornan, Co-PI Molenaar, Sep. 2002 – August. 2004.

(\$317,000 Total – \$60,000 CU – \$17,000 Univ. Match)

Best-Value Procurement Methods for Highway Construction Projects, *National Cooperative Highway Research Program (NCHRP 10-61)*, PI Scott, Co-PIs Molenaar & Gransberg, Apr. 2002 – Aug. 2004.

(\$325,000 Total – \$89,000 CU – \$25,000 Univ. Match)

Report Facilitator – European Asphalt Warranty Scanning Tour, *FHWA/AASHTO/NCHRP*, PI-Molenaar, Mar. 2002 – Jan. 2004.

(\$13,000 Total CU)

Design-Build Pilot Project Evaluation, *Washington State Department of Transportation*, PI Molenaar, Feb. 1999 – Dec. 2002.

(\$135,000 Total – \$120,000 CU – \$15,000 Univ. Match)

Design-Build for Water/Wastewater Treatment, *Black & Veatch, CH2Mhill, HDR, Jacobs, Filanc, Haskell, DBIA Research Foundation*, PI Molenaar, Aug. 2001 – Oct. 2002.

(\$45,000 Total – \$30,000 CU)

Report Facilitator – European Contract Administration Scanning Tour, *FHWA/AASHTO/NCHRP*, PI-Molenaar, Sep. 2000 – Sep. 2002.

(\$13,000 Total CU)

Study of Corporate Culture in Companies with Outstanding Safety Records, *American Society of Safety Engineers*, PI Molenaar, Jan. 2000 – May 2001.

(\$5,000 Total CU)

Design-Build Education Needs Assessment, *Design-Build Education and Research Foundation*, PI Molenaar, May 2000 - May 2001.

(\$5,000 Total CU)

Development of a Risk-Based Best-Value Selection Methodology for Federal, State and Local Governments, *University of Colorado*, PI Molenaar, Jan. 1999 – Jan. 2000.

(\$5,000 Total CU)

Keith R. Molenaar, Ph.D.

Georgia Construction Economic Impact Analysis, *ABC, AGC, GHC, NECA, HBAG, GACEC, CECA, MCAA, & CAAG*, Co-PI Chinowsky Co-PI Molenaar, Jan. 1999 – Oct. 1999
(\$50,000 Total Georgia Tech)

A Guide to Project Delivery for Federal Buildings, *U.S. General Services Administration*, Co-PIs Molenaar, Zimring and Augenbroe, Sep. 1998 – Dec. 1998
(\$15,000 Total/Georgia Tech)

XII. INDIVIDUAL STUDENT GUIDANCE

1. Ph.D. Students – Primary Advisory

Bogus, Susan, Co-Chair Doctoral Committee w/Diekmann, Graduated December 2003, “A Methodology to Reconfigure the Design-Construction Interface for Fast-Track Projects.”

Chang, Kyungsoo, Chair Doctoral Committee, Fall 2001 – Present, “Linear, Additive, Value Function-Based Best-Value Selection Model for Public Design-Build Projects.”

Gransberg, Doug, Principal Doctoral Advisor, Fall 2002 – Present, “Life Cycle Evaluation Criteria for Design-Build Highway Pavement Projects.”

Bastias, Alfonso, Principal Doctoral Advisor, Fall 2002 – Present.

Lee, Sangjoo, Principal Doctoral Advisor, Fall 2002 – Present.

Shane, Jennifer, Principal Doctoral Advisor, Fall 2003 – Present.

Won, Spencer, Principal Doctoral Advisor, January 2004 – Present.

Shin, Kyoochul (KC), Co-Chair Doctoral Committee w/Vanegas, Graduated – December 2000, “Identification of Critical Dispute Characteristics (CDC’s) During Construction Project Operations.”

2. Ph.D. Students – Committee Member

Poon Thiengburanthan, Member Doctoral Committee, Graduated – Fall 03, “Design of Construction Production Systems: Representation, Taxonomy and Design Framework”

Bygonsok Son, Member Doctoral Committee, 2002-2003.

Nilo Tsung, Member Doctoral Committee, 2001-2003.

Elhami Nasr, Member Doctoral Committee, 2001-2003.

Leonardo Rosas Sanchez, Member Doctoral Committee, 2003.

Krishna Chandra Prasad, Member Doctoral Committee, Graduated – Spring 2004, “Socioeconomic Module for Decision Support for Water Resource Management in South Africa.”

Aruz Petcherdchoo, Doctoral Committee, Graduated – Spring 2004, “Maintaining Condition and Safety of Deteriorating Bridges by Probabilistic Models and Optimization.”

Kononov, Jake, Member Doctoral Committee, Graduated – Fall 2001, “Road Accident Prediction Modeling and Diagnostics of Accident Causality: A Comprehensive Methodology.”

Kong, Jung, S., Member Doctoral Committee, Graduated – Spring 2001, “Lifetime Maintenance Strategies for Deteriorating Structures.”

Burkes, Angela, Doctoral Committee, Graduated – Summer 1998, “Multimedia Data Definition and Requirements for Construction Applications.”

Goodman, Robin, Doctoral Committee, Graduated – Summer 1998, “Taxonomy of Knowledge Requirements for Construction Industry Executives.”

Sillars, David, Doctoral Committee, Graduated – Spring 1998, “Pre-Operational Attributes as Predictors of Organizational Success within a Joint Venture.”

3. M.S. Students – Primary Thesis and Report Advisor

Shane, Jennifer, Chair MS Thesis Committee, Graduated – Fall 2003, “Design-Build Highway Construction: An Examination of Special Experimental Project Number 14 Performance.”

Won, Spencer, Chair MS Thesis Committee, Graduated – Fall 2003, “Classification of Life Cycle Cost Criteria in Design-Build Transportation Project RFPs”

Saller, Brian, Chair MS Report Committee, Graduated – Fall 2002, “Core Competencies for Design-Builders.”

Park, Joeng-il, Chair MS Report Committee, Graduated – Fall 2001, “A Study of Corporate Culture in Companies with Outstanding Construction Safety.”

Wang, Yang, Co-Chair w/Diekmann MS Report Committee, Graduated – Fall 2001, “The Application of Production Scheduling Techniques in Construction.”

Caile, Shreve, Chair MS Report Committee, Graduated – Spring 2001, “A Study of Corporate Culture in Companies with Outstanding Construction Safety.”

Keith R. Molenaar, Ph.D.

- Escobar, Katia, Chair MS Report Committee, Graduated – Fall 2000, “Technology Applications for Construction Project Control.”
- Chang, Kyungsoon, Chair MS Thesis Committee, Graduated – Fall 2000, “Appropriate Assessment Methods for Best-Value Selection in Public Design-Build Projects.”
- Chelette, Christopher, Chair MS Report Committee, Graduated – Spring 1999, “Qualification Based Selection for Contractors: Private Perspective.”
- Chinea, Jose, Chair MS Report Committee, Graduated – Spring 1999, “Alternative Financing for Highway Construction.”
- Jimenez, Luis Raul, Chair MS Report Committee, Graduated – Spring 1999, “A Case Study of Design-Build for Highway Construction.”
- Nicholson, Marc, Chair MS Report Committee, Graduated – Spring 1999, “Building Commissioning: The Next Step for Design-Build?”
- Sencer, Justin, Chair MS Report Committee, Graduated – Spring 1999, “Qualification Based Selection for Contractors: Public Perspective.”
- Vogel, Burr, Chair MS Report Committee, Graduated – Spring 1999, “Incentive and Disincentive Contracting in Highway Project.”
- Williams, Laura, Chair MS Report Committee, Graduated – Winter 1998, “A Model for Incorporating Finance into Design-Build.”
- Legrand, Roberto, Chair MS Report Committee, Graduated – Summer 1998, “A Comparison of Safety Plans for Offshore Oil Platforms.”
- Mazariegos, Guillermo, Chair MS Report Committee, Graduated – Summer 1998, “Effects of High Inflation in Construction Planning, Scheduling and Estimating.”
- Blohm, Karsten, Chair MS Report Committee, Graduated – Spring 1998, “Computer Simulation for Productivity Improvement in Construction Engineering.”
- Fischer, David, Chair MS Report Committee, Graduated – Spring 1998, “A Process Model for the Integration of Estimating and Accounting in Construction.”
- King, Willie Lee, Chair MS Report Committee, Graduated – Fall 1997, “Strategic Planning for Construction.”

4. M.S. Students – Thesis and Report Committee Member

- Bundy, Trace, MS Thesis Committee, Graduated – Summer 2003, “Modeling Water Use in Steam Power Plants.”
- Mark Krewedl, MS Report Examination Committee, Graduated – Fall 03, “Evaluation of the Construction Value Stream”
- Stewart, Travis, MS Report Committee, Graduated – Spring 2002, “Introduction to Lean Construction.”
- Allen, Linda, Associate Advisor, MS Thesis Committee, Naval Postgraduate School, Monterey, CA, Graduated – Fall 2001, “Comparison of Design-Build to Design-Bid-Build as a Project Development Method.”
- Derosier, Mike, MS Report Committee, Graduated – Spring 2001, “Use of Computer Modeling in Traffic Control Planning for Highway Construction.”
- Javernick, Amy, MS Report Committee, Graduated – Spring 2001, “The Designer’s Obligation for Cost Overruns in Design-Build Contracts.”
- Rodriguez, Peter, MS Report Committee, Graduated – Spring 2001, “Design-Build-Finance: Real Estate Development Opportunities in the A/E/C Industry.”
- Escobar, Jamie, MS Report Committee, Graduated – Fall 2000, “Low Income Housing: A Case Study Analysis for a Better Project Management Practice.”
- Stabile, Dana, MS Report Committee, Graduated – Fall 2000, “Real Estate Development and Construction: When Do We Begin? Where Do We End?”
- Ward, Steve, MS Report Committee, Graduated – Fall 2000, “The Future of Quality in Army Corps of Engineers: “Bullish” on ISO 9000.”
- Corotis, Lindsay, MS Report Committee, Graduated – Spring 2000, “The Success of RSA.”
- Island, Kristine, MS Report Committee, Graduated – Spring 2000, “The Success of the St. Joseph’s School Project.”
- Elliott, Kathy, MS Thesis Committee, Graduated – Summer 1998, “Environmental Impacts of Fast-Track Construction.”

5. M.S. Students – Comprehensive Examination Committee Member

- Busby, Katherine, Graduated – Spring 03
- Punsukumtana, Visut, Graduated – Spring 03
- Wells, Justin, Graduated – Spring 03

Keith R. Molenaar, Ph.D.

Cupp, Carl, Graduated – Summer 03
Weekly, John, Graduated – Summer 03
Hulse, Christopher, Graduated – Fall 03
Coggins, Steve, Graduated – Fall 03
Lagerquist, Kirk, Graduated – Summer 2002.
Berzins, Karin, Graduated – Summer 2002.
Oestereich, Michael, Graduated – Summer 2002.
Burgess, Lawrence, Graduated – Summer 2002.
Koster, Chad, Graduated – Summer 2002.
Motsko, Matt, Graduated – Summer 2002.
Morris, Matt, Graduated – Summer 2002.
Kim, Seungahn, Graduated – Spring 2002.
Patel, Tapan, Graduated – Fall 2001.
Capuano, Michael, Graduated – Summer 2001.
Charlton, Scott, Graduated – Summer 2001.
Comstock, Michael, Graduated – Summer 2001.
Hubard, Glenn, Graduated – Summer 2001.
Kurgan, Christopher, Graduated – Summer 2001.
Thomas, Jeff, Graduated – Summer 2001.
Vargas, Rose, Graduated – Spring 2001.
Ohlemacher, Don, Graduated – Spring 2001.

XIII. COURSE INSTRUCTION

1. University of Colorado

Fall 2003, *CVEN 3256 Construction Equipment and Methods*, Undergraduate Core Requirement, 50 students.
Spring 2002, *CVEN 5336 Construction Project Delivery*, Graduate Technical Elective, 10 students.
Fall 2002, *CVEN 3256 Construction Equipment and Methods*, Undergraduate Core Requirement, 52 students.
Spring 2002, *CVEN 5336 Construction Project Delivery*, Graduate Technical Core Requirement, 23 students.
Fall 2001, *CVEN 3256 Construction Equipment and Methods*, Undergraduate Core Requirement, 51 students.
Spring 2001, *CVEN 5326 Construction Project Controls*, Graduate Core Requirement, 16 students.
Spring 2001, *AREN 4416 Construction Costs/Estimating*, Undergraduate Technical Elective, 32 students.
Fall 2000, *CVEN 3256 Construction Equipment and Methods*, Undergraduate Core Requirement, 36 students.
Summer 2000, *CVEN 3246 Introduction to Construction*, Undergraduate Core Requirement, 12 students.
Spring 2000, *AREN 4416 Construction Costs/Estimating*, Undergraduate Technical Elective, 56 students.
Fall 1999, *CVEN 3246 Introduction to Construction*, Undergraduate Core Requirement, 44 students.

2. Georgia Institute of Technology

Spring 1999, *CE 4083 Advanced Planning and Estimating Methods*, Undergraduate Elective, 44 students.
Spring 1999, *CE 6023 Construction Engineering and Management II*, Graduate Core Requirement, 16 students.
Winter 1998, *CE 4043 Basic Planning and Estimating Methods*, Undergraduate Elective, 60 students.
Winter 1998, *CE 8061 Construction Seminar*, Graduate Core Requirement, 21 students.
Fall 1998, *CE 4003 Construction*, Undergraduate Core Requirement, 42 students.
Summer 1998, *CE 4003 Construction*, Undergraduate Core Requirement, 48 students.
Spring 1998, *CE 4083 Advanced Planning and Estimating Methods*, Undergraduate Elective, 49 students.
Spring 1998, *CE 6023 Construction Engineering and Management II*, Graduate Core Requirement, 23 students.
Fall 1997, *CE 8061 Construction Seminar*, Graduate Core Requirement, 28 students.
Fall 1997, *CE 4003 Construction*, Undergraduate Core Requirement, 32 students.

3. University of Colorado (as Instructor)

Spring 1997, *AREN 4416 Construction Costs/Estimating*, Undergraduate Elective, 43 students.
Spring 1996, *AREN 4416 Construction Costs/Estimating*, Undergraduate Elective, 27 students.

XIV. COURSE DEVELOPMENT

1. New Courses

Spring 02, *CVEN 5336 Construction Project Delivery*, Graduate Technical Elective, 3 credit hours.
Created new technical elective course for Construction Engineering and Management MS and PhD students

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focusing on innovative delivery of civil infrastructure projects, including design-build and public-private partnerships.

Spring 01, *CVEN 5326 Construction Project Controls*, Graduate Core Requirement, 3 credit hours.

Created new core requirement course for Construction Engineering and Management MS students focusing on advanced scheduling, estimating, and project control techniques, including the use of new technologies.

Fall 00, *CVEN 3256 Construction Equipment and Methods*, Undergraduate Core Requirement, 3 credit hours.

Created new core requirement course for Civil and Environmental Engineering undergraduate students focusing on construction engineering. This course is intended to correct an ABET deficiency in Environmental Engineering.

2. Major Revision of Existing Courses

Fall 99, *CVEN 3246 Introduction to Construction*, Undergraduate Core Requirement, 3 credit hours.

Revised syllabus, created new lectures, developed new five-module semester project, developed new group project to promote industry interaction, developed four new individual assignments.

XV. TEACHING AND EDUCATION WORKSHOPS

CETL Teaching Fellows, Georgia Institute of Technology, January-March, 1999.

NSF Engineering Education Scholars Workshop, Carnegie Mellon University, July 19-24, 1998.

NSF/SUCCEED Effective Teaching Workshop, Georgia Tech, October 2-3, 1997.

NSF/EDUTECH Design Education Workshop, Georgia Tech, September 8-9, 1997.

XVI. PRESENTATIONS AND INVITED LECTURES

"The Past and Future of Cost Engineering An Academic Perspective," *AACE International Chapter Meeting*, Lakewood, CO, November 2003.

"Best-Value Procurement Methods for Highway Construction Projects," *AASHTO Subcommittee on Construction Annual Meeting*, Asheville, SC, August 2003.

"Responding to Design-Build Request for Proposals," *DBIA Rocky Mountain Chapter Meeting*, Lakewood, CO, May, 2003.

"Report of the 2002 European Asphalt Warranties Scan Tour," *FHWA/MDOT Pavement Warranties Conference: Policy, Development and Implementation*, Grand Rapids, MI, May 2003.

"Project Delivery Approaches," *University of Colorado/Design-Build Institute of America, Rocky Mountain Owner's Design-Build Forum*, Boulder, CO, May 2003.

"Design-Build Pilot Project Evaluation: A measurement of performance for the process, time, cost and quality," *DBIA/AASHTO/FHWA/ASCE 2003 Design-Build for Transportation Conference*, Marina del Rey, CA, April 2003.

"Asphalt Warranties in US and European Highway Construction," *Colorado DOT Rocky Mountain Asphalt Conference*, Denver, CO, February 2003.

"Best Practices for Design-Build in the Water/Wastewater Industry," *DBIA/WEF/AWWA Design-Build for Water & Wastewater Facilities*, San Antonio, TX, January 2003.

"Critical Needs of Design-Build Education," *DBIA/WEF/AWWA Design-Build for Water & Wastewater Facilities*, San Antonio, TX, January 2003.

"Research Plan for Report to U.S. Congress on the Effectiveness of Design-Build," *AASHTO Design-Build Task Force Spring Meeting*, St. Petersburg, FL, January 2003.

"Non-Traditional Contracting Practices in the Building Industry," *FHWA Innovative Contracting Conference*, Norfolk, VA, December 2002.

"Asphalt Warranties in European Highway Construction," *Arizona DOT Pavements/Materials Conference*, Phoenix, AZ, November 2002.

Moderator – Innovative Project Delivery Session, *CIB's 10th International Symposium on the Organization and Management of Construction, Construction Innovation, and Global Competitiveness*, Cincinnati, OH, September 2002.

"Design-Build Contracting – Executive Seminar," *U.S. National Park Service*, Denver, CO, July 2002.

"Design-Build and Lean Construction," *Seminar Co-Presented with Greg Howell of the Lean Construction Institute for the Management Assistance Partnership*, Las Vegas, NV, March 2002.

"The Past and Future of Construction Estimating," *American Society of Professional Estimators – Rocky Mountain Chapter*, Denver, CO, March 2002.

"Design-Build Contracting – Executive Seminar," *Washington State Department of Transportation*, Olympia, WA, January 2002.

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- “European Contract Administration Tour: Results and Implementation,” *Transportation Research Board Annual Conference*, Washington, DC, January 2002.
- “Design-Build Contracting – Executive Presentation,” *New York Transit Authority*, Long Island, NY, December 2001.
- “Design-Build in the Public Sector,” *Arizona State University, Alliance for Construction Excellence, Alternative Delivery Conference*, Phoenix, AZ, November 2001.
- “Design-Build Educational Needs Assessment,” *2001 Professional Design-Build Institute of America Annual Conference*, Boston, MA, October 2001.
- “Project Delivery Options,” *Los Alamos National Laboratory*, Albuquerque, NM, October 2001.
- “European Contract Administration Tour: Results and Implementation,” *ASSHTO Conference for Subcommittee on Construction*, Wichita, KS, August 2001.
- “Design-Build Roles and Relationships,” *National Electrical Contractor’s Association – Rocky Mountain Chapter*, Denver, CO, January 2001.
- “U.S. Design-Build Theory and Practice,” *2-Day Seminar for the Lean Construction Institute of Brazil*, Sao Palo, Brazil, October 2000.
- “European Contract Administration Desk Scan,” *International Program of the Federal Highway Administration*, Washington, DC, October 2000.
- “Program Execution Strategies,” *U.S. Department of State Foreign Building Operations Symposium*, Washington, DC, December 2000.
- Moderator – Computer Applications Session, Delivery Methods and Risk Session, and Business and Management Session, *ASCE Construction Congress VI*, Orlando, FL, February 2000.
- “The Design-Build Contracting Practice: Newest Tools for Owners, Design-Build Consultants, and Practitioners,” *DBIA/WEF/AWWA Design-Build for Water & Wastewater Facilities*, Phoenix, AZ, December 1999.
- “WSDOT Design-Build Pilot Project,” *1999 Professional Design-Build Conference, Design-Build Institute of America Annual Conference*, Dallas, TX, October 1999.
- “Colorado AIA/AGC/ACEC Roundtable Discussion on Owner’s Representation in the Construction Industry,” *Meeting of the Denver AIA/AGC/ACEC Joint Committee*, Denver, CO, October 1999.
- “Design-Build for Highway Construction,” *Georgia Quality Initiative, Federal Highway Administration and Georgia Department of Transportation*, Athens, GA, January 1999.
- “Solicitation and Selection of Design-Build Proposals in Transportation,” *Georgia Department of Transportation*, Atlanta, GA, November 1998.
- Moderator – Decision Tools in Civil Engineering Session, *ASCE International Computing Congress*, Boston, MA, October 1998.
- “New Innovations in Project Management,” *Construction Management Association of America National Conference*, St. Petersburg, FL, October 1998.
- “Project Delivery for Federal Buildings,” *U.S. General Services Administration Construction Excellence Symposium*, Washington, DC, September 1998.
- “Design-Build and Innovative Contracting,” *Georgia Department of Transportation*, Atlanta, Georgia, June 1998.
- “Current Design-Build Research and Resources,” *Society for Marketing of Professional Services*, Atlanta, GA, June 1998.
- “Construction at the Georgia Institute of Technology,” *American Society of Professional Estimators*, Atlanta, GA, February 1998.
- Moderator – Changing Project Delivery Systems Session, *ASCE Construction Congress V*, Minneapolis, MN, October 1997.
- “Organizational Structure for Successful Design-Build,” *ASCE Construction Congress IV*, San Diego, CA, October 1995.

XVII. PROFESSIONAL CONTINUING EDUCATION

- “Design-Build Scope Definition and Risk Allocation,” *1-Day Seminar for the Washington State Department of Transportation*, Fife, WA, January 2004.
- “Design-Build Contracting,” *2-Day Short Course for the U.S. Department of the Navy*, Yuma, CA, August 2003.
- “Design-Build Contracting,” *2-Day Short Course for the American Society of Civil Engineering*, Manchester, NH, February, 2003.
- “Design-Build Contracting,” *2-Day Short Course for the U.S. National Park Service*, Denver, CO, July 2002.

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- “RFQ and RFP Design-Build Contract Development for Highway Projects,” *2-Day Short Course for the Washington State Department of Transportation*, Seattle, WA, September and January 2002.
- “Design-Build Contract Administration for Highway Projects,” *3-Day Short Course for the Washington State Department of Transportation*, Seattle, WA, January 2002.
- “Design-Build Contracting,” *2-Day Short Course for the Federal Highway Administration*, Washington, DC, Denver, CO, and Vancouver, WA, 3 Courses in 2000-2001.
- “Advanced Design-Build Project Management,” *3-Day Short Course for the U.S. Department of the Navy*, San Diego, CA, 3 Courses 2000-2001.
- “Design-Build Contracting,” *2-Day Short Course for the Long Island Railroad*, New York, NY, November 2001.
- “Best Practices in Design-Build Project Management,” *2-Day Short Course for the University of California/Design-Build Institute of America*, San Diego, CA, November 2001.
- “Construction Cost Engineering,” *2-Day Short Course for the American Society of Civil Engineering*, Orlando, FL, June 2001.
- “Best Practices in Design-Build Project Management,” *2-Day Short Course for the University of Colorado/Design-Build Institute of America*, Denver, CO, June 2001.
- “Advanced Design-Build Contracting,” *2-Day Short Course for the University of Colorado/Design-Build Institute of America*, Denver, CO, April 2000.
- “Design-Build Project Management: The Art and Science,” *2-Day Short Course for Georgia Tech/Design-Build Institute of America*, Atlanta, GA, April 1999.
- “Advanced Techniques in Design-Build Project Delivery & Finance,” *2-Day Short Course for Arizona State University/Design-Build Institute of America*, Phoenix, AZ, November 1998.
- “Advanced Techniques in Design-Build Project Delivery & Finance,” *2-Day Short Course for Georgia Tech/Design-Build Institute of America*, Atlanta, GA, May 1998.
- “Design-Build Management,” *2-Day Short Course for Georgia Tech/Associated General Contractors*, Atlanta, GA, February 1998.

XVIII. SERVICE ACTIVITIES

1. Professional Contributions

Society Membership

- AACE – Association for the Advancement of Cost Engineering International, 2001-2004.
- ASCE – American Society of Civil Engineers, 1995-2004.
- ASPE – American Society of Professional Estimators, 1994-1999.
- CMAA – Construction Management Association of America, 1998-2004.
- DBIA – Design-Build Institute of America, 1995-2004.
- IABMS – International Association for Bridge Maintenance and Safety, 2001-2002.

Society Committees

- AACE – Association for the Advancement of Cost Engineering International
- Committee Member, Construction Special Interest Group, 2001-2004.
- ABC – Associated Builders and Contractors of Colorado
- Committee Judge, Award of Excellence, 2003.
- AGC – Associated General Contractors of Colorado
- Committee Judge, Award for Construction Excellence (ACE), 2000.
- ASCE – American Society of Civil Engineers
- Construction Research Council, Member 1997-2004, Secretary 2002, Vice-Chair 2003, Chair 2004.
 - Constructability Committee, Member 2003-2004.
 - Peurifoy Construction Engineering and Management Award Committee, 2001, 2003-2005.
 - Control Group Member, of the Technical Council on Computing and Information Technology's Coordination of Computing Activities (CoCOA), 1997-2001.
 - Member, Computing in Construction Committee, 1997-2000.
- ASPE – American Society of Professional Estimators
- Rocky Mountain Chapter Member 1994-1997.
 - Southeast Atlantic Chapter, 1997-1999.
- CMAA – Construction Management Association of America

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- Member 1998-2004.
- Board Member, Southeast Atlantic Chapter, 1998-1999.
- DBIA – Design-Build Institute of America
 - Awards Committee for Distinguished Leadership Awards, 2003.
 - Subcommittee Chair for Member Education, Education and Research Committee, 1999-2002.
 - Board Member/Education Committee Chair, Rocky Mountain Chapter, 2002-2003.
 - Civil Infrastructure Committee Member, 2000-2003.
- GQI – Georgia Quality Initiative U.S. Department of Transportation/Federal Highway Administration/Georgia Department of Transportation
 - Alternative Contracting Subcommittee Member, 1998.
- GSA – U.S. General Services Administration
 - Construction Excellence Peer Review Committee, 2000-2004.

Conference Planning Committees

- AIA/AGC/ACEC – American Institute of Architects/Associated General Contractors/American Consulting Engineers Council Joint Liaison Committee of Colorado
 - Conference Planning Committee, *Owner's Project Delivery Conference*, 1999.
- ASCE – American Society of Civil Engineers
 - Technical Chair/Proceedings Editor, Conference Planning Committee, *Construction Research Congress*, 2003.
 - Conference Planning Committee, *Fully Integrated and Automated Project Processes*, 2002.
 - Conference Planning Committee, *Construction Congress VI*, 1999.
- DBIA – Design-Build Institute of America
 - Conference Planning Committee, *Design-Build in Water/Wastewater Treatment Conference*, 2001, 2003 and 2004.
 - Conference Planning Committee, *Design-Build in Transportation Conference*, 2003 and 2004.
- NSF – National Science Foundation
 - Conference Planning Committee, *Construction Engineering and Management Research Methods Workshop*, 2004.
 - Conference Planning Committee, *Earth Systems Engineering*, 2001.

National Science Foundation (NSF) Proposal Panelist Reviewer

- NSF Knowledge and Distributed Intelligence (KDI) Program, 1999.
- NSF CAREER Program, 1999.

Publications Reviewer

- ASCE Journal of Construction Engineering and Management
- ASCE Journal of Computing in Civil Engineering
- ASCE Journal of Management in Engineering
- International Journal of Construction Procurement
- ASCE Southeast Conference Section Proceedings, 2000
- ASCE Construction Congress VII Proceedings, 2000
- ASCE International Computing Congress Proceedings, 1998
- ASCE Construction Congress VI Proceedings, 1997

Book Reviews

- Peurifoy, R.L. and Schexnayder C.J. (2003). *Construction Planning, Equipment, and Methods*, 7th Edition, McGraw-Hill Companies, Inc. Boston, MA.
- Pena-Mora, F., Sosa, C. and McCone, S. (2001). *Resolution in Large Scale Civil Engineering*, Pearson Education, Upper Saddle River, New Jersey.
- ACEC (2001). *Multiple Project Delivery Systems: The Design Professional's Handbook, Design-Build Project Delivery*, American Consulting Engineers Council, Washington, DC
- Best, R., De Valence, G. (1999). *Building in Value*. Arnold, London
- Rojas, E. (1999). *Construction Cost Estimating for Decision-Makers*. Prentice Hall, New Jersey.

2. Campus Contributions

University of Colorado – Campus

Instructor, High School Honors Program, College of Engineering, 2002.

Advisor, Summer Multicultural Advancement in Research and Training (SMART Program), 2002.

University of Colorado – Department of Civil, Environmental, and Architectural Engineering

Graduate Committee, 2000-2004.

Geotech Faculty Search Committee, 2003-2004.

Consortium on Advanced Life Cycle Engineering for Sustainable Civil Environments (COALCESCE) Committee, 2001-2004.

Computing Committee, 2000-2002.

ABET Ad Hoc Committee, 2001-2002.

Construction Engineering and Management Computer Applications Laboratory Coordinator, 1999-2004.

Construction Engineering and Management Faculty Search Committee, 2000-2002.

DBIA Student Chapter Faculty Advisor, 2000-2002.

ABC Student Chapter Faculty Advisor, 2001-2002.

Faculty Meeting Minute Recorder, 1999-2000.

3. Consulting

Carter-Burgess

Emerging Solutions, Inc./Constructware

J.A. Jones/Metric Constructors

Montgomery Watson Harza Engineering

Seattle Public Utilities

Talisman Partners

U.S. Federal Highway Administration

U.S. Naval Facilities Engineering Command

Washington State Department of Transportation